

# CHANGE ISSUE – RTCA SC-186 WG-1/WG-4

## ASAS MOPS

Tracking Information (committee secretary only)	
Change Issue Number	
Submission Date	
Status (open/closed/deferred)	
Last Action Date	

Short Title for Change Issue:	Interface requirements from ASSAP to CDTI
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Topic (1=ASA 2=High-level 3=ASAS 4=STP 5=ASSAP 6=CDTI): 5			
Document Reference: ASA MASPS		Originator Information:	
Entire document (y/n)	N	Name	Tom Eich
Section number(s)	3.3.3.3.1	Phone	(623) 445-6672
Paragraph number(s)		E-mail	tom.eich@l-3com.com
		Other	

Proposed Rationale for Consideration (originator should check all that apply):	
<input type="checkbox"/>	Item needed to coordinate with other documents
<input checked="" type="checkbox"/>	ASA MASPS
<input type="checkbox"/>	1090 MHz Link MOPS
<input type="checkbox"/>	UAT Link MOPS
<input type="checkbox"/>	TIS-B MASPS
<input type="checkbox"/>	Previously written CDTI MOPS
<input type="checkbox"/>	Other (include document title):
<input type="checkbox"/>	Item needed for harmonization with international requirements
<input type="checkbox"/>	Item identified during recent ADS-B development activities and operational evaluations
<input type="checkbox"/>	MOPS clarifications and correction item
<input type="checkbox"/>	Validation/modification of questioned MOPS requirement item
<input type="checkbox"/>	Military use provision item
<input type="checkbox"/>	New requirement item

Nature of Issue:	<input type="checkbox"/> Editorial	<input type="checkbox"/> Clarity	<input type="checkbox"/> Performance	<input type="checkbox"/> Functional
Issue Description (attach additional sheets if necessary):				
See attachment.				

Originator's proposed resolution if any (attach additional sheets if necessary):
See attachment

Note: Attach additional sheets to capture supporting discussion with source and date.

## Issue Overview:

Section 3.3.3.3.1 of the ASA MASPS contains requirements for CDTI inputs from ASSAP. This issue paper proposes changes to these input parameters to support the initial release of the ASSAP and CDTI MOPS.

## Issue Description and Proposed Resolution:

The following table describes the issues regarding each parameter in question and proposes a recommended resolution. In the ASA MASPS, reference Table 3-21 Summary of Required CDTI Inputs from the ASSAP Function.

Parameter	Issue Description	Recommended Resolution
Display Range / Map Scale	Currently, this parameter is defined as a required CDTI input from ASSAP. The "Display Range / Map Scale" may also be controlled directly from the CDTI or by an external flight crew interface source such as a control panel, therefore not requiring an input from ASSAP.	ASSAP MOPS: Recommend that this parameter is an "optional" output from ASSAP to the CDTI.  CDTI MOPS: Recommend that this parameter is "required" but may be provided internally, from an external flight crew interface source, or from ASSAP.
Display Orientation, True	Currently, this parameter is defined as a required CDTI input from ASSAP. The "Display Orientation, True" may also be controlled directly from the CDTI or by an external flight crew interface source such as a control panel, therefore not requiring an input from ASSAP.	ASSAP MOPS: Recommend that this parameter is an "optional" output from ASSAP to the CDTI.  CDTI MOPS: Recommend that this parameter is "required" but may be provided internally, from an external flight crew interface source, or from ASSAP.
Display Orientation, Mag	Currently, this parameter is defined as a required CDTI input from ASSAP. The "Display Orientation, Mag" may also be controlled directly from the CDTI or by an external flight crew interface source such as a control panel, therefore not requiring an input from ASSAP.	ASSAP MOPS: Recommend that this parameter is an "optional" output from ASSAP to the CDTI.  CDTI MOPS: Recommend that this parameter is "required" but may be provided internally, from an external flight crew interface source, or from ASSAP.
Call Sign / Flight ID	"Call Sign" is generally used in human communication only. "Flight ID" is used in both human and automation communication, therefore this parameter from ASSAP should only be referred to as "Flight ID".	ASSAP & CDTI MOPS: Recommend removing all references to "Call Sign" unless used for human communication only. "Flight ID" should only be used.

Parameter	Issue Description	Recommended Resolution
Traffic Geometric Altitude	Per ASA MASPS Section 3.3.3.1.4.7 Traffic Altitude, Traffic Geometric or Pressure Altitude can be used to calculate Relative Altitude for airborne traffic. Pressure Altitude should only be used for displaying Actual Traffic Altitude (ABSOLUTE).	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI. As a minimum, Traffic Pressure Altitude is “required” to support the display of relative or actual traffic altitude.</p> <p>CDTI MOPS: Recommend that this parameter is an “optional” input from ASSAP. If used, this parameter should only be used to calculate Traffic Relative Altitude based on own geometric altitude and traffic geometric altitude. When geometric altitude is used, this should be indicated on the CDTI.</p>
Quality of Traffic Directionality	Quality of Traffic Directionality may be calculated based on own-ship and traffic velocity accuracy.	??? Needs further discussion between the CDTI and ASSAP MOPS group.
Traffic Vertical Sense	<p>New proposed parameter to support the Vertical Rate Indicator as defined in the ASA MASPS Section 3.3.3.1.4.8 Traffic Vertical Rate Indicator.</p> <p>??? Is this required for ADS-B/TIS-B Only Traffic ???</p>	<p>ASSAP MOPS: Recommend that this parameter is a “required” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is a “required” input from ASSAP to support the Vertical Rate Indicator.</p>
Traffic Ground Status	New proposed parameter for differentiating Airborne Traffic and Ground Traffic on the CDTI.	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is an “optional” input from ASSAP to support differentiating between airborne and ground traffic on the CDTI.</p>
Traffic Type	New proposed parameter for differentiating the type of traffic source on the CDTI (TCAS, ADS-B, TIS-B, ADS-R, etc.).	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is an “optional” input from ASSAP to support differentiating between the types of traffic on the CDTI.</p>

Parameter	Issue Description	Recommended Resolution
Traffic TCAS Correlated	New proposed parameter to indicate that the ADS-B, TIS-B, or ADS-R traffic is correlated to a TCAS track.	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is an “optional” input from ASSAP to support traffic icons that indicate TCAS correlation.</p>
Own-ship Horizontal Position	New proposed parameter to support the positioning of ADS-B, TIS-B, and ADS-R traffic relative to own-ship symbol. Reference ASA MASPS Section 3.3.3.1.4.5 Traffic Horizontal Position.	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is “required” but may be provided from some other external source other than ASSAP.</p>
Own-ship Horizontal Velocity	New proposed parameter to support the Horizontal Velocity Vector as defined in the ASA MASPS Section 3.3.3.1.4.9 Horizontal Velocity Vector.	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is “required” but may be provided from some other external source other than ASSAP.</p>
Own-ship Ground Speed	New proposed parameter to support the displaying of own-ship ground speed on the CDTI.	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is “optional” but may also be provided from some other external source other than ASSAP.</p>
Own-ship Heading	New proposed parameter to support the positioning of ADS-B, TIS-B, and ADS-R traffic relative to own-ship symbol.	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is “optional” but may also be provided from some other external source other than ASSAP.</p>

Parameter	Issue Description	Recommended Resolution
Own-ship Track Angle	New proposed parameter to support the calculation of traffic directionality.	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is “required” but may also be provided from some other external source other than ASSAP.</p>
Own-ship Pressure Altitude	New proposed parameter to support the determination of traffic actual altitude if their relative altitude is only known.	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is “optional” but may also be provided from some other external source other than ASSAP.</p>
Own-ship Position Quality	New proposed parameter to report own-ship position degradation.	<p>ASSAP MOPS: Recommend that this parameter is a “required” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is “required”.</p>
Own-ship Usable for Active Applications	<p>New proposed parameter to determine if own-ship data is qualified for active applications.</p> <p>??? Which applications does this apply to and how is it used on the CDTI ???</p>	<p>ASSAP MOPS: Recommend that this parameter is a “required” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is “required”.</p>
Own-ship Length / Width	New proposed parameter to indicate own-ship length and width on the CDTI.	<p>ASSAP MOPS: Recommend that this parameter is an “optional” output from ASSAP to the CDTI.</p> <p>CDTI MOPS: Recommend that this parameter is “required”.</p>